
From: Graeme Coulson [REDACTED]
Sent: Thursday, 15 May 2025 1:18 PM
To: WildlifeRoadStrikeInquiry
Subject: Submission by Graeme Coulson
Attachments: Coulson 1982 - Macropod roadkills in Victoria.pdf; Coulson 1989 - Drought effect on macropod roadkills.pdf; Coulson 1997 - Male bias in macropod roadkills.pdf; Coulson et al. 2014 - Hopping down the main street.pdf; Coulson & Bender 2019 - Roadkill mitigation is paved with good intentions.pdf; Bender & Coulson 2021 - Evaluating the ShuRoo.pdf; Coulson & Bender 2022 - Wombat roadkill not reduced.pdf; 10 million animals die on our roads each year. Here's what works (and what doesn't) to cut the toll.pdf

Parliament of Victoria
Legislative Council
Economy and Infrastructure Committee
Parliament House
Spring Street
East Melbourne

Submission to the Parliamentary Inquiry into wildlife road strike in Victoria

I have conducted research on the phenomenon of wildlife road strike, particularly in macropods (kangaroos and wallabies), for over four decades. My early work focused on the ecological aspects of road strike, identifying some of the risk factors involved. This included research on an urban kangaroo population in Anglesea, where road strike was a major concern for the local community. I also carried out the first scientific evaluation of kangaroo warning signs, showing that they had no effect on the rate of road strike. These studies have been published in peer-reviewed journals –

Coulson, G. M. (1982). Road-kills of macropods on a section of highway in central Victoria. *Australian Wildlife Research* 9: 21-26.

Coulson, G. (1989) The effect of drought on road mortality of macropods. *Australian Wildlife Research* 16: 79-83.

Coulson, G. (1997). Male bias in road-kills of macropods. *Wildlife Research* 23: 21-25.

Coulson, G., Cripps, J. K and Wilson, M. E. (2014). Hopping down the main street: Eastern Grey Kangaroos at home in an urban matrix. *Animals* 4, 272-291.

More recently, my colleague Dr Helena Bender and I have focused on the efficacy of commercial products, ShuRoo and Virtual Fence, which are claimed to deter wildlife from roadways. Peer-reviewed publications arising from this work are –

Coulson, G. and Bender, H. (2019). Roadkill mitigation is paved with good intentions: a critique of Fox *et al.* (2019). *Australian Mammalogy* 42, 122-130.

Bender, H. and Coulson, G. (2021). Roo the day: evaluating the ShuRoo for prevention of macropod-vehicle collisions. *Australian Zoologist* 42, 690-698.

Coulson, G. and Bender, H. (2022). Wombat roadkill was not reduced by a virtual fence. Comment on Stannard *et al.* Can virtual fences reduce wombat road mortalities? *Ecological Engineering* 2021, 172, 106414. *Animals* 12, 1323.

We also wrote an article in *The Conversation* in 2024. This was aimed at a broader audience, outlining the roadkill problem and reviewing the range of mitigation options. We expressed our concern that too many mitigation methods lacked a solid understanding of animal biology, and too many evaluations of them were limited by poor study design and inadequate monitoring.

Dr Bender and I are closely involved in development and testing of a new device, the RooBadge, which has been designed by Nakatomi, a technology group, and funded by Volkswagen. We completed field trials on kangaroos late last year and are now analysing video data from the trials in fine detail.

We also presented a joint talk entitled 'Thinking critically: developing and testing technology to mitigate wildlife-vehicle collisions' at a symposium on 'Using technology to reduce wildlife-vehicle collisions', held in Sydney in May 2024. The symposium summary and links to all the talks are available at <https://www.transport.nsw.gov.au/system/files/media/documents/2024/Symposium-Using-technology-to-reduce-wildlife-vehicle-collisions-event-summary.pdf>

We are currently members of a steering committee to design and implement trials of two new mitigation measures under investigation by Transport for New South Wales. This work arose from their report 'Next steps: Using technology to reduce wildlife-vehicle collisions'. The Transport for New South Wales report is available at <https://www.transport.nsw.gov.au/system/files/media/documents/2025/Using-technology-to-reduce-wildlife-vehicle-collisions-Directions-Report.pdf>

I would welcome an opportunity to expand on these points and provide further evidence to the committee. I attach copies of my publications on wildlife road strike for your reference.

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Google Scholar: <https://scholar.google.com.au/citations?user=bUpbVHkAAAAJ&hl=en&oi=ao>

I acknowledge the Traditional Owners of the land on which I work, and pay my respects to the Elders, past and present.



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