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Wildlife Research

Supplementary Material

Characterising a unique recreational hunting method: hound hunting of sambar deer (*Cervus unicolor*) in Victoria, Australia

Jordan O. Hampton[A,B,*], *Andrew J. Bengsen*[C,D], *Sebastien Comte*[C], *Jason S. Flesch*[E], *Simon D. Toop*[E], *Christopher Davies*[F,H], *and David M. Forsyth*[C,G]

[A]Faculty of Science, University of Melbourne, Parkville, Vic. 3052, Australia.

[B]Harry Butler Institute, Murdoch University, 90 South Street, Murdoch, WA 6150, Australia.

[C]Vertebrate Pest Research Unit, New South Wales Department of Primary Industries, 1447 Forest Road, Orange, NSW 2800, Australia.

[D]Biosphere Environmental Consultants, South Lismore, NSW 2480, Australia.

[E]Game Management Authority, Level 2, 535 Bourke Street, Melbourne, Vic. 3000, Australia.

[F]Australian Deer Association, PO Box 299, Warragul, Vic. 3820, Australia.

[G]School of Biological, Earth and Environmental Sciences, University of New South Wales, Sydney, NSW 2052, Australia.

[H]Present address: Parks Victoria, 65 Church Street, Morwell, Vic. 3840, Australia.

[*]Correspondence to: Jordan O. Hampton Faculty of Science, University of Melbourne, Parkville, Vic. 3052, Australia Email: jordan.hampton@unimelb.edu.au

Table S1. Spatial and temporal variables used as covariates to examine sambar deer (*Cervus unicolor*) kill sites during hound hunting in Victoria, south-eastern Australia, in 2020–2021.

Variable name (abbreviation)	Units	Description	Resolution	Source and access date	Reference
Elevation	Metres above sea level (m)	The digital elevation model (DEM) is constructed from source data of various resolutions, accuracies and ages to produce an improved DEM containing increased detail in localised areas.	100 metres by 100 metres	http://services.land.vic.gov.au/SpatialDatamart/ Vicmap Elevation DEM 10m 28/10/2020	Department of Environment, Land, Water & Planning ANZVI0803003582
Slope	Degrees	The slope for each cell of the DEM was computed according to Horn (1981), using the eight neighbouring cells. The calculation was done using the function terrain from the R-package raster (v3.1-5).	100 metres by 100 metres	http://services.land.vic.gov.au/SpatialDatamart/ Vicmap Elevation DEM 10m 28/10/2020	Horn, B.K.P., 1981. Hill shading and the reflectance map. Proceedings of the IEEE 69:14-47
Aspect	Degrees	The aspect for each cell of the DEM was computed according to Horn (1981), using the eight neighbouring cells. The calculation was done using the function terrain from the R-package raster (v3.1-5).	100 metres by 100 metres	http://services.land.vic.gov.au/SpatialDatamart/ Vicmap Elevation DEM 10m 28/10/2020	Horn, B.K.P., 1981. Hill shading and the reflectance map. Proceedings of the IEEE 69:14-47
Distance to water	Metres	This layer is part of Vicmap Hydro and contains line features delineating hydrological features. Includes channels, rivers, streams & connectors.	100 metres by 100 metres	http://services.land.vic.gov.au/SpatialDatamart/ Watercourse Network 1:25,000 - Vicmap Hydro	Department of Environment, Land, Water & Planning ANZVI0803002490

		Gives the linear distance (m) between the centre of each 25 by 25 m grid cells and the nearest line feature. The raster was then resampled to a 100 m grid through pixel averaging.		26/10/2020	
Distance to road	Metres	Vicmap Transport: Road network represents the transport network of the state of Victoria and is made up of line features. Gives the linear distance (m) between the centre of each 25 by 25 m grid cells and the nearest line feature. The raster was then resampled to a 100 m grid through pixel averaging.	100 metres by 100 metres	http://services.land.vic.gov.au/SpatialDatamart/ Vicmap Transport: Road network 28/10/2020	Department of Environment, Land, Water & Planning ANZVI0803002441
Woody cover	Probability	Gives the probability that the landcover at each 25 by 25 m pixel is 'woody vegetation' across the years 2015-2019 (see White et. al 2020). The raster was then resampled to a 100 m grid and through pixel averaging and converted to an integer scale (where 100 equals a probability of 1).	100 metres by 100 metres	Data provided by M. White, Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning. 28/10/2020	White, M., Griffioen, P. and Newell, G. (2020). Multi-temporal Native Vegetation Extent for Victoria. Arthur Rylah Institute for Environmental Research Technical Report No 311. Department of Environment, Land, Water and Planning.

Table S2. Matrix of Pearson's correlation coefficients for each pair of spatial covariates used to model the spatial distribution of sambar deer (*Cervus unicolor*) kill sites in Victoria, Australia, in 2020–2021: (a) hunting crew 1 at Omeo, (b) hunting crew 4 at Dargo.

(a) Omeo	**Elevation**	**Slope**	**Aspect**	**Woody vegetation**	**Distance to roads**	**Distance to watercourses**
Elevation	1.00	-0.39	-0.19	0.12	0.04	0.66
Slope		1.00	0.22	0.17	0.25	-0.29
Aspect			1.00	0.16	0.20	-0.07
Woody vegetation				1.00	0.28	0.18
Distance to roads					1.00	0.14
Distance to watercourses						1.00

(b) Dargo	**Elevation**	**Slope**	**Aspect**	**Woody vegetation**	**Distance to roads**	**Distance to watercourses**
Elevation	1.00	-0.66	-0.16	-0.19	-0.43	0.61
Slope		1.00	0.15	0.18	0.28	-0.55
Aspect			1.00	0.06	0.16	-0.08
Woody vegetation				1.00	0.17	-0.08
Distance to roads					1.00	-0.05
Distance to watercourses						1.00