

Supplementary Material

Combining acoustic localisation and high-resolution land cover classification to study predator vocalisation behaviour

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Table S1. Confusion matrices for the five maps assessed: those produced in this study using either the original NAIP data or the PCA-reduced data at 1 m resolution; the published land cover data for Wisconsin (Wisconsin Department of Natural Resources 2016); and the PCA-reduced map at 11 m and 30 m resolution. Cell entries indicate the number of validation pixels assigned to that category by either the land cover map or the reference classification. Validations for the reference classifications were made manually by two independent validators.

			<i>Reference</i>					
			Validator 1			Validator 2		
			Forest	Open	Water	Forest	Open	Water
<i>Map</i>	NAIP 1 m	Forest	80	19	1	79	18	3
		Open	37	63	0	38	62	0
		Water	2	0	82	2	2	80
	PCA-reduced 1 m	Forest	100	5	11	100	5	11
		Open	19	72	0	19	71	1
		Water	0	5	72	0	6	71
	Published map	Forest	26	4	1	26	5	0
		Open	93	73	19	93	74	18
		Water	0	5	63	0	3	65
PCA-reduced 11 m	Forest	99	10	8	99	10	8	
	Open	20	67	11	20	68	10	
	Water	0	5	64	0	4	65	
PCA-reduced 30 m	Forest	95	15	9	96	14	9	
	Open	24	63	13	23	65	12	
	Water	0	4	61	0	3	62	

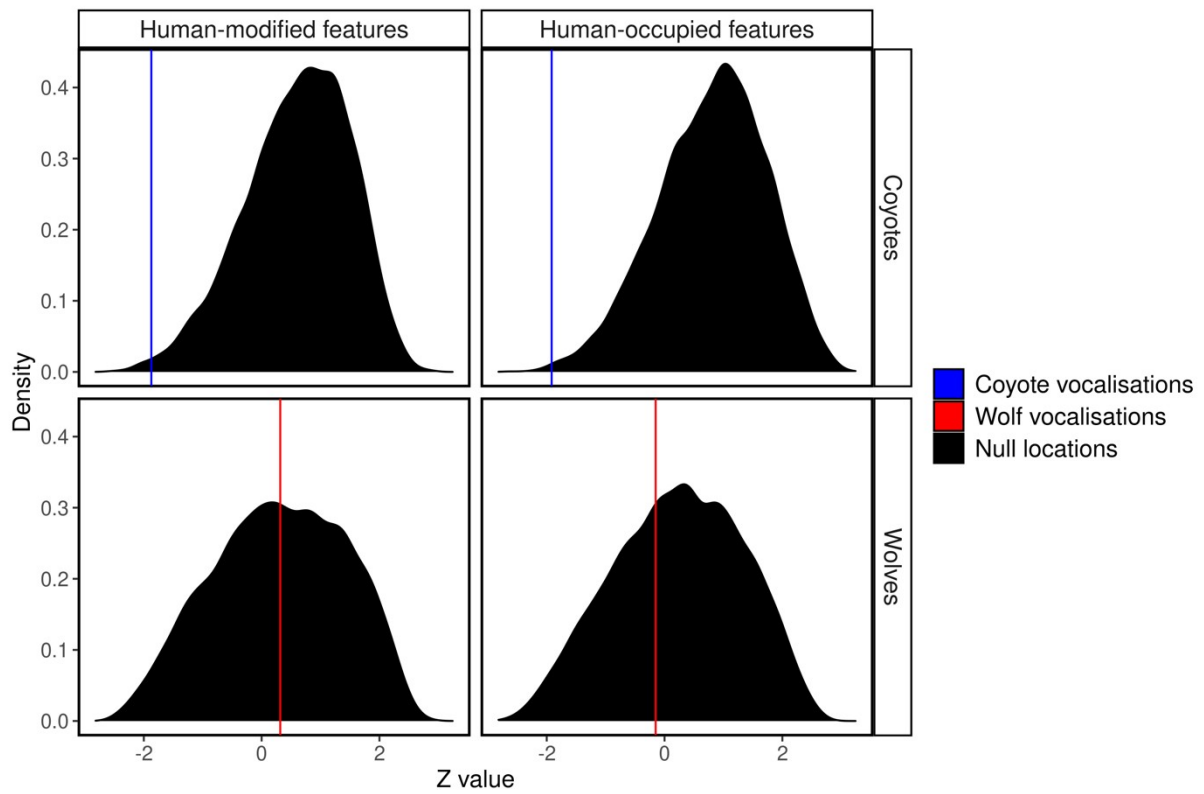


Figure S1. Null distribution of Z values (coefficient divided by standard error) for logistic regressions of the effect of distances from human-modified (left-hand panel) or human-occupied (right-hand panel) features on land cover (forest or open) for sets of 45 (for coyotes) or 29 (for wolves) non-water pixels randomly sampled from each species' vocalisation area. Vertical lines represent the Z value of the logistic regression fitted to coyote (blue) and wolf (red) vocalisation locations.

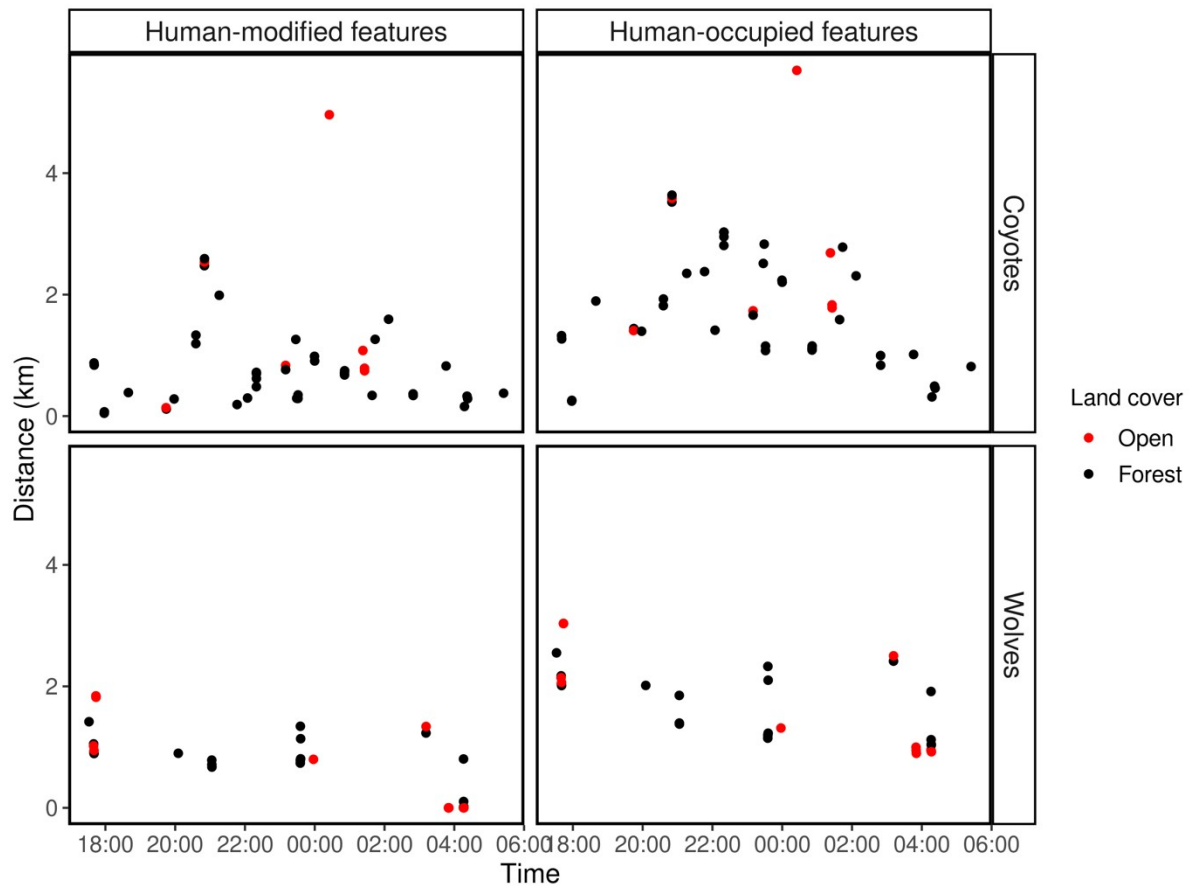


Figure S2. The temporal distributions of coyote (top panel) and wolf (bottom panel) vocalisations, relating the land cover type and distance to human-modified (left-hand panel) or human-occupied (right-hand panel) features of the vocalisations to the time at which they occurred. Colour indicates the land cover type that each vocalisation was localised in (red = open, black = forest).