

## Supplementary material

**Tab S1.** List and sampling method of environmental variables and variables associated with the placement of each camera trap, included in the generalized linear mixed models (GLMMs).

Variables	Sampling method
Shrub cover	Visual estimate of the percentage of shrub plants with a height between 30 and 150 cm, within a circular area around the camera trap (radius: 10 m).
Habitat type	<b>Open/Ecotone</b> = open areas, often at the interface of wood patches, including abandoned pastures/ groves of olive <i>Olea europaea</i> , often recolonised by bushes. <b>Oak</b> = areas characterised by a dominant tree cover of oaks, which can vary in density and size. <b>Pinewood</b> = areas predominantly covered by pine trees, typically forming forests with a sparse understory due to the shading provided by the tall trees. <b>Shrubland</b> = an area characterised by vegetation dominated by shrubs.
Camera height	Measurement of the camera trap's height from the ground.
Camera model	Various camera trap models used in the study, including: Owlzer Guard Z2, Comitel Guard Micro 2, Ir-Plus HD, Ir-Plus 110°, and Comitel Guard.

**Tab. S2** Results of model selection for factors influencing the probability of diurnal activity ('diurnality') of each age class and sex of the target wild ungulate species, estimated by means of generalised linear mixed models with binomial errors. The five top-rated models are shown, together with their number of parameters (K), Akaike Information Criterion corrected (AICc),  $\Delta$ AICc, standardised weight, conditional  $R^2$  ( $R^2_c$ ) and marginal  $R^2$  ( $R^2_m$ ). Selected models are shown in bold; models annotated with '\*' were not selected because they are more complex versions of simpler models

Specie	Model	Variables	K	LogLik	AICc	$\Delta AICc$	Weight	R <sup>2</sup> c	R <sup>2</sup> m
<b>Roe deer (M)</b>	<b>Best</b>	<b>Fallow deer + Season</b>	<b>7</b>	<b>-169.922</b>	<b>352.096</b>	<b>0.00</b>	<b>0.532</b>	<b>0.485</b>	<b>0.241</b>
	<b>Second</b>	<b>Season</b>	<b>6</b>	<b>-171.086</b>	<b>352.351</b>	<b>0.255</b>	<b>0.468</b>	<b>0.458</b>	<b>0.220</b>
	Third	Fallow deer + Season + People *	8	-169.516	353.368	1.272	-	-	-
	Fourth	Fallow deer + Season + Wolf *	8	-169.712	353.761	1.665	-	-	-
	Fifth	Season + People *	7	-170.813	353.877	1.781	-	-	-
<b>Roe deer (F)</b>	<b>Best</b>	<b>Season</b>	<b>6</b>	<b>-118.578</b>	<b>247.433</b>	<b>0.00</b>	<b>1</b>	<b>0.174</b>	<b>0.082</b>
	Second	Season + Wolf *	7	-117.805	248.001	0.568	-	-	-
	Third	Season + People *	7	-118.017	248.426	0.993	-	-	-
	Fourth	Season + People + Wolf *	8	-117.172	248.867	1.434	-	-	-
	Fifth	Season + Fallow	7	-118.338	249.908	2.475	-	-	-
<b>Fallow deer (F)</b>	<b>Best</b>	<b>Wolf + People</b>	<b>5</b>	<b>-839.263</b>	<b>1686.544</b>	<b>0.00</b>	<b>0.580</b>	<b>0.399</b>	<b>0.013</b>
	<b>Second</b>	<b>Wolf</b>	<b>4</b>	<b>-840.588</b>	<b>1687.188</b>	<b>0.644</b>	<b>0.420</b>	<b>0.386</b>	<b>0.007</b>
	Third	Wolf + People + Season *	6	-839.116	1688.259	1.715	-	-	-
	Fourth	Wolf + Season	5	-840.351	1688.720	2.176	-	-	-
	Fifth	People	4	-841.380	1688.771	2.227	-	-	-
<b>Fallow deer (AM)</b>	<b>Best</b>	<b>Season</b>	<b>4</b>	<b>-317.787</b>	<b>641.611</b>	<b>0.00</b>	<b>0.399</b>	<b>0.297</b>	<b>0.002</b>
	<b>Second</b>	<b>People</b>	<b>4</b>	<b>-318.051</b>	<b>642.139</b>	<b>0.528</b>	<b>0.306</b>	<b>0.285</b>	<b>0.00</b>
	<b>Third</b>	<b>Wolf</b>	<b>4</b>	<b>-318.087</b>	<b>642.211</b>	<b>0.600</b>	<b>0.295</b>	<b>0.285</b>	<b>0.00</b>
	Fourth	Season + People *	5	-317.768	643.599	1.988	-	-	-
	Fifth	Season + Wolf	5	-317.786	643.634	2.023	-	-	-
<b>Fallow deer (YM)</b>	<b>Best</b>	<b>Wolf + Season</b>	<b>5</b>	<b>-121.078</b>	<b>250.291</b>	<b>0.00</b>	<b>0.695</b>	<b>0.493</b>	<b>0.049</b>
	Second	Wolf + Season + People *	6	-120.680	251.562	1.271	-	-	-
	<b>Third</b>	<b>Season</b>	<b>4</b>	<b>-122.928</b>	<b>251.937</b>	<b>1.646</b>	<b>0.305</b>	<b>0.482</b>	<b>0.034</b>
	Fourth	Season + People	5	-122.371	252.876	2.585	-	-	-
	Fifth	Wolf	4	-124.470	255.021	4.730	-	-	-

**Tab. S3** Results of model selection for factors influencing monthly detection rates variation of each age class and sex of the target wild ungulate species, estimated through generalized linear mixed models with negative binomial errors. The five top-ranked models are shown, together with their number of parameters (K), Akaike Information Criterion corrected (AICc),  $\Delta$ AICc, standardized weight, conditional  $R^2$  ( $R^2_c$ ) and marginal  $R^2$  ( $R^2_m$ ). Selected models are shown in bold; models annotated with \* have not been selected because they are more complex version of simpler models

Specie	Model	Variables	K	LogLik	AICc	$\Delta$ AICc	Weight	$R^2_c$	$R^2_m$
<b>Roe deer (M)</b>	<b>Best</b>	<b>Habitat + Season + Shrub cover + Height + Fallow deer</b>	<b>13</b>	<b>-514.000</b>	<b>1054.530</b>	<b>0.000</b>	<b>0.376</b>	<b>0.438</b>	<b>0.213</b>
	<b>Second</b>	<b>Habitat + Season + Shrub cover + Fallow deer</b>	<b>12</b>	<b>-515.396</b>	<b>1055.246</b>	<b>0.716</b>	<b>0.327</b>	<b>0.436</b>	<b>0.200</b>
	Third	Habitat + Season + Height + Fallow deer *	12	-515.561	1055.576	1.046	-	-	-
	<b>Fourth</b>	<b>Habitat + Season + Fallow deer</b>	<b>11</b>	<b>-516.653</b>	<b>1055.688</b>	<b>1.158</b>	<b>0.297</b>	<b>0.441</b>	<b>0.187</b>
	Fifth	Habitat + Season + Shrub cover + Fallow deer *	12	-515.893	1056.239	1.709	-	-	-
<b>Roe deer (F)</b>	<b>Best</b>	<b>Season + Shrub cover + Height + Fallow deer + Habitat</b>	<b>13</b>	<b>-412.585</b>	<b>849.624</b>	<b>0.000</b>	<b>0.453</b>	<b>0.365</b>	<b>0.173</b>
	<b>Second</b>	<b>Season + Shrub cover + Fallow deer</b>	<b>9</b>	<b>-417.014</b>	<b>850.237</b>	<b>0.613</b>	<b>0.333</b>	<b>0.339</b>	<b>0.107</b>
	Third	Season + Shrub cover + Fallow deer + Habitat *	12	-414.206	850.795	1.171	-	-	-
	<b>Fourth</b>	<b>Season + Fallow deer</b>	<b>8</b>	<b>-418.479</b>	<b>851.119</b>	<b>1.495</b>	<b>0.214</b>	<b>0.337</b>	<b>0.086</b>
	Fifth	Season + Shrub cover + Height + Habitat *	12	-414.425	851.233	1.609	-	-	-
<b>Fallow deer (F)</b>	<b>Best</b>	<b>Season + People</b>	<b>6</b>	<b>-662.762</b>	<b>1335.698</b>	<b>0.00</b>	<b>0.519</b>	<b>0.697</b>	<b>0.007</b>
	<b>Second</b>	<b>Season</b>	<b>5</b>	<b>-663.870</b>	<b>1335.856</b>	<b>0.158</b>	<b>0.481</b>	<b>0.700</b>	<b>0.005</b>
	Third	Season + People + Wolf *	7	-662.337	1336.918	1.220	-	-	-
	Fourth	Season + People + Shrub cover *	7	-662.355	1336.954	1.256	-	-	-
	Fifth	Season + Wolf *	6	-663.449	1337.072	1.374	-	-	-
<b>Fallow deer (AM)</b>	<b>Best</b>	<b>Season</b>	<b>5</b>	<b>-448.566</b>	<b>907.305</b>	<b>0.00</b>	<b>1</b>	<b>0.582</b>	<b>0.036</b>
	Second	Season + People *	6	-447.976	908.196	0.890	-	-	-
	Third	Season + Height *	6	-448.494	909.233	1.928	-	-	-
	Fourth	Season + Wolf *	6	-448.495	909.233	1.928	-	-	-

	Fifth	Season + Shrub cover	6	-448.552	909.348	2.043	-	-	-
<b>Fallow deer (YM)</b>	<b>Best</b>	<b>Shrub cover + People</b>	<b>6</b>	<b>-260.563</b>	<b>531.300</b>	<b>0.00</b>	<b>0.682</b>	<b>0.782</b>	<b>0.191</b>
	Second	Shrub cover + People + Season *	7	-260.105	532.454	1.154	-	-	-
	<b>Third</b>	<b>People</b>	<b>5</b>	<b>-262.359</b>	<b>532.833</b>	<b>1.533</b>	<b>0.318</b>	<b>0.782</b>	<b>0.114</b>
	Fourth	Shrub cover + People + Wolf *	7	-260.412	533.068	1.768	-	-	-
	Fifth	Shrub cover + People + Height *	7	-260.492	533.288	1.988	-	-	-