



Area	2015	2016	2017	2018	2019	2020
Axial Pyrenees	5.6	6.7	5.21	3.18	3.65	6.7
Pre-Pyrenees	3.85	3.67	5.33	6.63	7.35	5.66

**Supplementary Table 1:** Density of red deer in each study area (average individuals/ km<sup>2</sup>) estimated using the distance sampling methodology. Data obtained through nocturnal transects with a vehicle using 2 spotlights per vehicle by the Dept. of Agriculture, Livestock, Fisheries and Food, Generalitat de Catalunya, Spain.

Group	Species	% Axial Pyrenees	% Pre-Pyrenees
Other woody	<i>Calluna vulgaris</i>	13.76	0
Other woody	<i>Cistus sp</i>	0	0.03
Other woody	<i>Genista balansae</i>	1.93	0.19
Other woody	<i>Genista cinerea</i>	0	0.01
Other woody	<i>Hippocrepis comosa</i>	0	0.06
Other woody	<i>Juniperus communis</i>	4.68	2.32
Other woody	<i>Ononis tridentata</i>	0	0.01
Other woody	<i>Prunus sp</i>	0	0.05
Other woody	<i>Prunus sp</i>	0.01	0
Other woody	<i>Thymus sp</i>	0	0.18
Other woody	<i>Other woody</i>	0.96	0
	Total Other woody	21.34	2.85
Quercus	<i>Quercus ilex</i>	0	37.83
Quercus	<i>Quercus petraea</i>	17.61	0.33
	Total Quercus	17.61	38.16
Pinus	<i>Pinus sp</i>	3.3	20.31
	Total Pinus	3.3	20.31
Forbs	<i>Brassicaceae</i>	2.21	0.03
Forbs	<i>Carex sp</i>	0.57	1.64
Forbs	<i>Cruciata glabra</i>	0	0.17
Forbs	<i>Medicago suffruticosa</i>	0	0.01
Forbs	<i>Rubia peregrina</i>	0.07	0.1
Forbs	<i>Sedum sp</i>	0.06	0
Forbs	<i>Solanum nigrum</i>	0	0.22
Forbs	<i>Valeriana montana</i>	0.16	0
Forbs	<i>Verbascum sp</i>	1.23	0.1
Forbs	<i>Vicia pyrenaica</i>	0.14	0
Forbs	Other forbs	4.17	3.54
	Total Forbs	8.6	5.81
Graminoids	<i>Aegilops geniculata</i>	0	1.11
Graminoids	<i>Avenula pratensis agg.</i>	0	0.07
Graminoids	<i>Bromus hordeaceus</i>	0	0.07

Graminoids	<i>Hordeum murinum</i>	0	0.06
Graminoids	<i>Lolium sp</i>	0	0.02
Graminoids	<i>Poa pratensis</i>	0	1.32
Graminoids	<i>Poa trivialis</i>	0	0.09
Graminoids	<i>Trisetum flavescens</i>	0	0.13
Graminoids	<i>Other Graminoids</i>	49.14	29.99
	<i>Total Graminoids</i>	49.14	32.86

**Supplementary Table 2:** Percentage of diet items, identified to the finest possible taxonomic level, in the diet composition of sampled deer in the Axial Pyrenees and Pre-Pyrenees study areas. "Group" indicates aggregated classes used in the analyses.

Axial Pyrenees	
Genista scrubland	31t and 31u
Deciduous forest	31ac, 41e, 41h, 41i2, 41r and 41s
Pine forest	42af, 42f, 42g, 42l and 42p
Other	31c, 31f and 37d
Grassland	35b, 35h, 36e, 36f2, 36g, 36u, 38b and 38d1
Pre-Pyrenees	
Other	32u, 32w and 62a
Buxus scrubland	32aa
Fields	82c and 87a
Quercus forest	41f, 41k and 45f
Pine forest	42i, 42j, 42k, 42m and 42t
Grassland	41f, 41k and 45f

**Supplementary Table 3:** Categories and habitats extracted with the individual buffers from a CORINE map (Vigo et al., 2006).