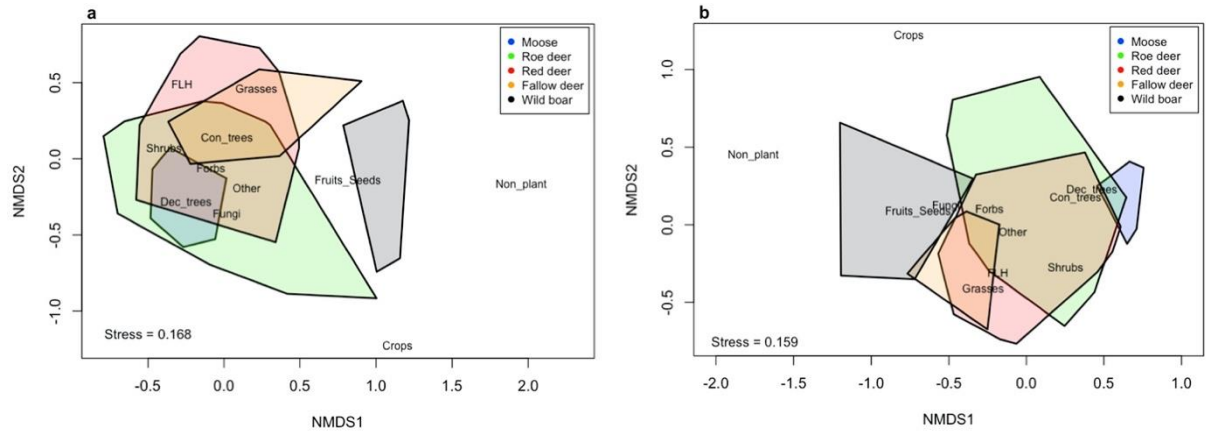


Oikos

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Appendix 1



**Figure. A1** Niche partitioning during the growing season (a) and winter (b). Non-metric multidimensional scaling (NMDS) ordination of Bray-Curtis dissimilarities for the diets of 5 ungulate species (indicated by colours) and their association with food items. For better visibility, minimum convex polygons (connecting the vertices of the diet data points for each species) instead of individual diets are shown.

**Table A1.** Average diet compositions (as percentages with the standard error in parentheses) for five ungulate species during different seasons.

Diet data was extracted from 87 European studies (indicated by the numbers in the last column of the table) and standardized into 11 food

Species	Season	N	Grasses	Forbs	Shrubs	FLH	Deciduous trees	Coniferous trees	Fruits and seeds	Fungi	Crops	Other	Non-plant food	Reference(s) <sup>a</sup>
Moose	Spring	1	2.75	4.6	30.5	1.8	22.7	21.35	0	0	0	16.3	0	20
	Summer	13	5.22 (1.69)	12.72 (5.51)	19.82 (3.77)	1.27 (0.47)	55.22 (4.68)	0.1 (0.1)	0 (0)	0.02 (0.02)	0 (0)	5.63 (2.17)	0 (0)	10,20,36,53,84,85
	Autumn	1	2.77	2.7	28.53	0.33	22.03	32.37	0	0.13	0	11.13	0	20
	Winter	9	0.03 (0.03)	0.02 (0.01)	26.09 (8.02)	0 (0)	41.56 (7.42)	30.53 (6.13)	0 (0)	0 (0)	0 (0)	1.77 (1.55)	0 (0)	2,3,20,29,57,77
Roe deer	Spring	21	13.59 (2.99)	17.54 (2.7)	30.27 (5.57)	0.87 (0.47)	14.83 (3.2)	9.62 (2.28)	1.07 (0.53)	0.24 (0.23)	4.18 (2.73)	7.8 (2.91)	0 (0)	7,8,9,20,21,22,24,32,34,38,39,40,41,43,50,51,65,72,78
	Summer	23	6.18 (2.01)	20.82 (4.91)	33.99 (5.37)	0.42 (0.2)	19.15 (4.15)	3.11 (1.46)	0.97 (0.54)	0.85 (0.37)	4.56 (4.23)	9.95 (3.26)	0 (0)	1,7,8,9,20,21,24,28,32,34,39,40,41,43,50,51,54,60,65,67,72,78
	Autumn	23	6.95 (1.67)	11.01 (2)	38.6 (5.19)	1.95 (0.91)	14.44 (3.08)	4.74 (1.34)	6.16 (3.08)	1.7 (0.6)	4.83 (2.71)	9.61 (2.92)	0 (0)	1,7,8,9,20,21,22,24,26,32,34,39,40,41,43,50,51,65,72,76,78
	Winter	41	6.16 (1.51)	7.67 (1.24)	32.84 (3.26)	1.48 (0.6)	16.11 (2.99)	17 (2.58)	4.42 (1.31)	0.38 (0.17)	6.91 (3.04)	7.01 (1.77)	0.01 (0)	1,7,8,9,11,13,20,21,22,24,26,28,30,31,32,34,37,38,39,40,41,43,44,46,50,51,54,59,62,65,68,69,70,72,76,78,80,81
Red deer	Spring	17	40.4 (6.19)	13.08 (3.25)	20.91 (5.84)	0.65 (0.22)	17.92 (6.33)	3.76 (1.56)	0.37 (0.17)	0.06 (0.04)	0.17 (0.12)	2.68 (1.16)	0 (0)	5,6,9,14,18,40,41,48,51,52,58,63,66,74,79,87

Species	Season	N	Grasses	Forbs	Shrubs	FLH	Deciduous trees	Coniferous trees	Fruits and seeds	Fungi	Crops	Other	Non-plant food	Reference(s) <sup>a</sup>
	Summer	24	41.95 (6.06)	13.85 (2.31)	17.58 (4.28)	1.06 (0.49)	18.16 (4.49)	3.15 (1.06)	0.31 (0.16)	0.11 (0.09)	0.91 (0.54)	2.93 (1.16)	0 (0)	5,6,9,14,17,18,19,40,41,42,49,51,52,54,58,63,66,74,82,83,87
	Autumn	22	33.07 (5.46)	11.73 (2.62)	19.56 (4.14)	3.01 (1.65)	17.85 (3.94)	2.31 (0.75)	5.84 (2.44)	0.16 (0.06)	0.93 (0.72)	5.55 (2.31)	0 (0)	6,9,14,23,24,27,33,40,41,51,52,56,58,63,66,71,73,74,76,87
	Winter	38	22.71 (3.47)	1.89 (0.43)	28.76 (3.64)	2.15 (0.79)	18.17 (3.51)	16.91 (2.47)	2.22 (0.85)	0.13 (0.05)	0.48 (0.23)	6.58 (1.6)	0 (0)	2,4,5,6,9,13,14,18,23,24,40,41,42,47,48,49,51,52,54,55,62,66,70,73,74,76,79,80,81,87
Fallow deer	Spring	4	60.67 (16.23)	4.97 (3.14)	10.34 (5.19)	0.12 (0.08)	18.65 (9.42)	0.66 (0.66)	0 (0)	0 (0)	0 (0)	4.59 (3.96)	0 (0)	6,16,45,75
	Summer	4	63.03 (16.64)	2.49 (1.88)	10.02 (5.4)	2.73 (2.59)	14.37 (5)	0 (0)	0.11 (0.11)	0 (0)	0 (0)	7.25 (5.23)	0 (0)	6,45,60,75
	Autumn	4	42.91 (12.41)	3.02 (1.85)	10.09 (4.56)	0.24 (0.15)	13.4 (8.86)	0.67 (0.67)	25.75 (18.13)	0.67 (0.67)	0 (0)	3.25 (2.21)	0 (0)	6,16,45,75
	Winter	6	42.93 (6.38)	4.19 (1.58)	10.75 (4.95)	1.17 (0.52)	11.09 (2.33)	8.51 (2.84)	13 (8.21)	0.39 (0.25)	1.82 (1.6)	6.16 (2.26)	0 (0)	6,12,45,70,75
Wild boar	Spring	2	32.28 (19.05)	6.61 (6.61)	0 (0)	0 (0)	0 (0)	0 (0)	15.39 (15.39)	0 (0)	22.86 (22.86)	5.47 (5.42)	17.39 (10.39)	25,61
	Summer	2	26.64 (21.91)	2.37 (2.37)	0 (0)	0 (0)	0 (0)	0 (0)	19.53 (17.24)	0 (0)	39.94 (39.94)	4.2 (0.02)	7.31 (3.13)	25,61
	Autumn	4	15.39 (8.55)	0.79 (0.47)	1.44 (1.44)	0.39 (0.39)	0.11 (0.11)	0.11 (0.11)	38.23 (10.82)	0.59 (0.36)	35.21 (20.49)	4.53 (1.54)	3.23 (1.11)	15,25,61,86
	Winter	6	21.34 (11.5)	4.07 (1.51)	4.11 (2.69)	2.96 (2.05)	3.24 (2.58)	2.77 (2.63)	20.94 (11.16)	0.58 (0.51)	24.25 (14.56)	11.08 (2.78)	4.65 (0.99)	15,25,35,61,64

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